GREEN AUDIT REPORT

of

Bareilly International University, Bareilly

Pilibhit Bypass Road Bareilly,
Uttar Pradesh 243 006 India

Year: 2022-23

Prepared by:

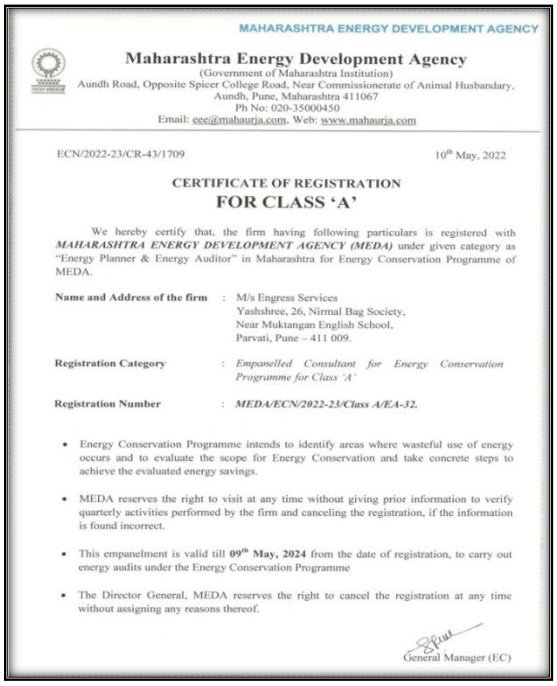
ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society
Near Muktangan English School, Parvati, Pune 411009
Phone: 09890444795Email: engress123@gmail.com

SUSHIL KUMAR THAKUR

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REGISTRATION CERTIFICATES



MAHARASHTRA ENERGY DEVELOPMENT AGENCY

Maharashtra Energy Development Agency
(Government of Maharashtra Institution)
Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary, Aundh, Pune, Maharashtra 411067
Ph No: 020-35000450
Email: eee@mahaurja.com, Web: www.mahaurja.com

ECN/2022-23/CR-43/1709 — 10th May, 2022

CERTIFICATE OF REGISTRATION
FOR CLASS 'A'

We hereby certify that, the firm having following particulars is registered with *MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)* under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.

Name and Address of the firm : M/s Engress Services
Yashshree, 26, Nirmal Bag Society,
Near Muktangan English School,
Parvati, Pune – 411 009.

Registration Category : *Empanelled Consultant for Energy Conservation Programme for Class 'A'*

Registration Number : *MEDA/ECN/2022-23/Class A/EA-32.*

- Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and take concrete steps to achieve the evaluated energy savings.
- MEDA reserves the right to visit at any time without giving prior information to verify quarterly activities performed by the firm and canceling the registration, if the information is found incorrect.
- This empanelment is valid till **09th May, 2024** from the date of registration, to carry out energy audits under the Energy Conservation Programme
- The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.

General Manager (EC)

MEDA Registration Certificate



GEM Certificate

ASSOCHAM hereby certifies that

Mr. A Y Mehendale

has successfully passed the
Green and Eco-friendly Movement Certified Professional Test (GEM CP)
with
"Excellent Performance"
on
06 June, 2022

He/she is now eligible to execute the GEM Sustainability Certification Projects.
ASSOCHAM feels proud to award the GEM Certified Professional title to him/her.

Pankaj R. Dharkar
Chairman, GEM

GEM CP 22/788

Deepak Sood
Secretary General, ASSOCHAM

GEM Certified Professional Certificate



Certificate of Registration

This is to Certify that
Quality Management System of

ENGRESS SERVICES

26, YASHASHREE, BLOCK 1, LOKMANYA NAGAR, NIRMAL BAUG SOC, PARVATI, PUNE- 411009, MAHARASHTRA, INDIA

has been assessed and found to conform to the requirements of
ISO 9001:2015
for the following scope :

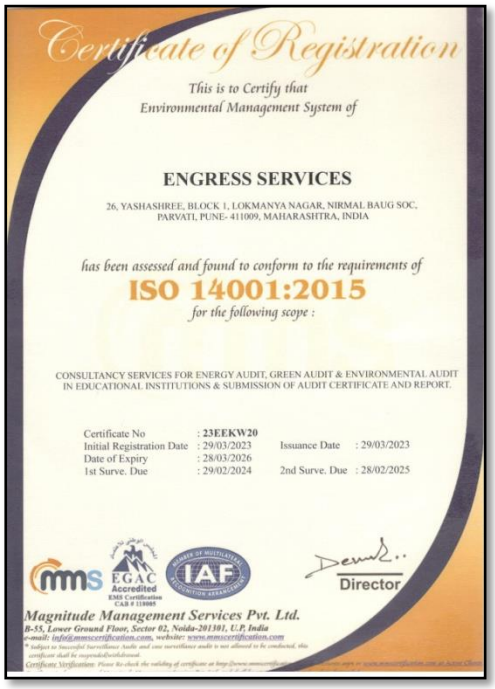
CONSULTANCY SERVICES FOR ENERGY AUDIT, GREEN AUDIT & ENVIRONMENTAL AUDIT IN EDUCATIONAL INSTITUTIONS & SUBMISSION OF AUDIT CERTIFICATE AND REPORT.

Certificate No	: 23EQKC13		
Initial Registration Date	: 27/03/2023	Issuance Date	: 27/03/2023
Date of Expiry	: 26/03/2026		
1st Surve. Due	: 27/02/2024	2nd Surve. Due	: 27/02/2025

Director

Magnitude Management Services Pvt. Ltd.
B-55, Lower Ground Floor, Sector 02, Noida-201301, U.P. India

ISO: 9001-2015 Certificate



Certificate of Registration

This is to Certify that
Environmental Management System of

ENGRESS SERVICES

26, YASHASHREE, BLOCK 1, LOKMANYA NAGAR, NIRMAL BAUG SOC, PARVATI, PUNE- 411009, MAHARASHTRA, INDIA

has been assessed and found to conform to the requirements of
ISO 14001:2015
for the following scope :

CONSULTANCY SERVICES FOR ENERGY AUDIT, GREEN AUDIT & ENVIRONMENTAL AUDIT IN EDUCATIONAL INSTITUTIONS & SUBMISSION OF AUDIT CERTIFICATE AND REPORT.

Certificate No	: 23EEKW20		
Initial Registration Date	: 29/03/2023	Issuance Date	: 29/03/2023
Date of Expiry	: 28/03/2026		
1st Surve. Due	: 29/02/2024	2nd Surve. Due	: 28/02/2025

Director

Magnitude Management Services Pvt. Ltd.
B-55, Lower Ground Floor, Sector 02, Noida-201301, U.P. India

ISO: 14001-2015 Certificate

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ACKNOWLEDGEMENT

We Engress Services, Pune, express our sincere gratitude to the management of Bareilly International University, Bareillyfor awarding us the assignment of Green Audit of their Campus for the Year: 2022-23.

We are thankful to all the staff members for helping us during the field study.

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EXECUTIVE SUMMARY

1. Bareilly International University, Bareilly consumes Energy in the form of **Electrical Energy;**used for various Electrical Equipment, office & other facilities.

2. Present Energy Consumption& CO_2 Emission:

No	Particulars	Value	Unit
1	Annual Energy Consumption	**4234833**	kWh
2	Annual CO_2 Emissions	**3811.34**	MT

3. Renewable Energy & Energy Efficiency Projects:

- Usage of Energy Efficient LED Fittings
- Usage of Energy Efficient BEE STAR Rated equipment
- Maximum usage of Day Lighting

4. Waste Management:

5.1 Segregation of Wasteat Source:

The Waste is segregated at source in separate Waste Bins & is handed over for further action.

5.2 Bio Composting Machine:

The University has a Bio CompostingMachine, to convert the Leafy Waste into Bio Compost.

5.3Liquid Waste Management:

The University has installed Waste Water Treatment plant.

5.4Sanitary Waste Management:

The University has installed Sanitary Waste Incinerator, fordisposal of the Sanitary Waste.

5.5EWaste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

6. Rain Water Harvesting:

The University has installed the Rainwater Harvestingproject; the rain water falling on the terrace is collected through pipes and is used for recharging the land water table.

7. Green & Sustainable Practices:

- Maintenance of good Internal Road
- Maintenance of Internal Garden: 100 plusTrees in the campus.

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- Provision of Lift and Rampfor Divyangajan
- Creation of awareness on Resource Conservation Display of Posters

8. Assumption:

1. 1 kWh of Electrical Energy releases **0.9 Kg** of **CO_2**into atmosphere

9. Reference:

- For CO_2 Emissions: www.tatapower.com

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ABBREVIATIONS

BEE	Bureau of Energy Efficiency
kWh	Kilo Watt Hour
LPD	Liters Per Day
Kg	Kilo Gram
MT	Metric Ton
CO_2	Carbon Di Oxide
Qty	Quantity

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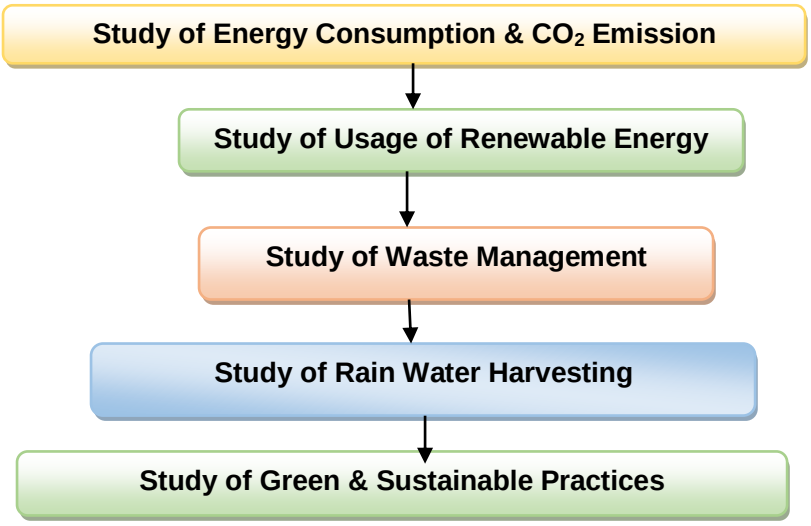
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CHAPTER-I
INTRODUCTION

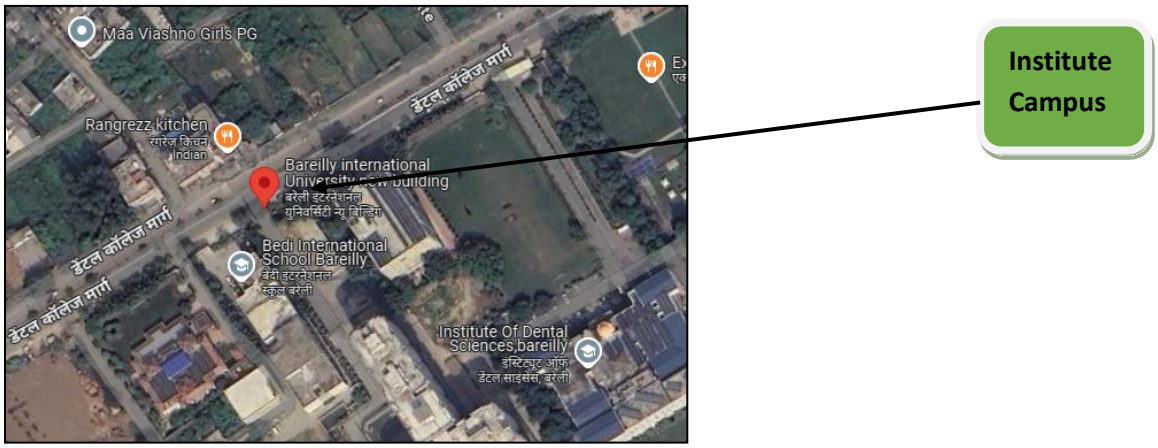
1.1 Introduction:

A Green Audit is conducted at Bareilly International University, Bareilly.

1.2 Audit Procedural Steps:



1.3 Institute Location Image:



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CHAPTER-II
STUDY OF ENERGY CONSUMPTION& CO_2 EMISSION

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the Institute for performing its day to day activities

The Institute uses Electrical Energy for various Electrical gadgets.

Basis for computation of CO_2 Emissions:

The basis of Calculation for CO_2 emissions due to Electrical Energy is as under

- **1 kWh** of Electrical Energy releases **0.9 Kg of CO_2** into atmosphere

Based on the above Data we compute the CO_2 emissions which are being released in to the atmosphere by the Institute due to its Day to Day operations

Table No1: Month wise CO_2 Emissions:

No	Month	Energy Consumed, kWh	CO_2 Emissions, MT
1	Apr-22	269527	242.57
2	May-22	383640	345.28
3	Jun-22	383625	345.26
4	Jul-22	414993	373.49
5	Aug-22	383907	345.52
6	Sep-22	318384	286.55
7	Oct-22	287285	258.56
8	Nov-22	221544	199.39
9	Dec-22	226058	203.45
10	Jan-23	450443	405.40
11	Feb-23	433062	389.76
12	Mar-23	462365	416.13
13	Total	4234833	3811.35
14	Maximum	462365	416.13
15	Minimum	221544	199.39
16	Average	352902.75	317.61

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Chart No 1: Month wise CO_2Emissions:

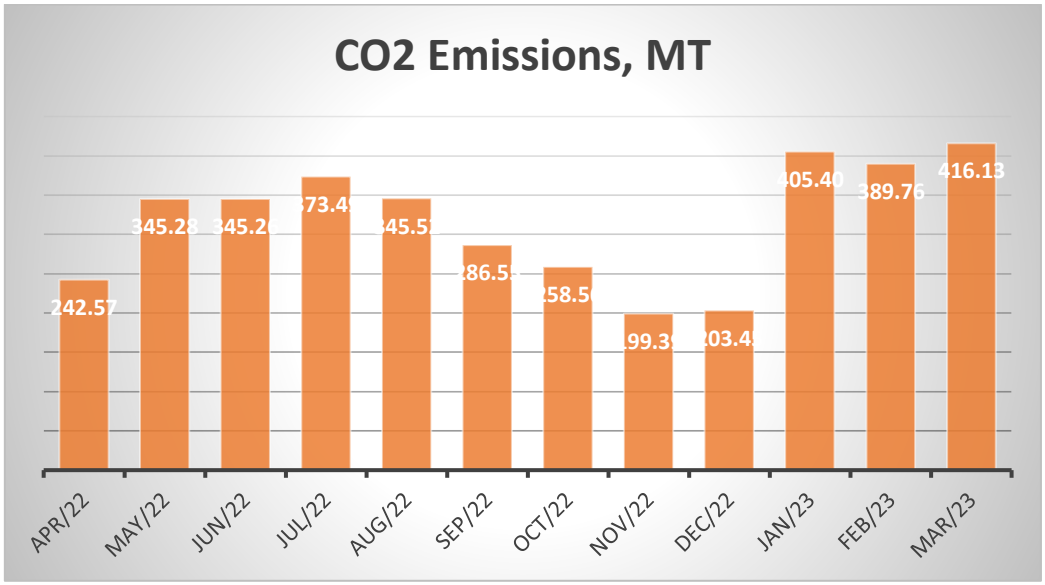


Table No2: Important Parameters:

No	Parameter/ Value	Energy Consumed, kWh	CO_2 Emissions, MT
1	Total	4234833	3811.35
2	Maximum	462365	416.13
3	Minimum	221544	199.39
4	Average	352902.75	317.61

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CHAPTER III
STUDY OF USAGE OF RENEWABLE ENERGY

The Institute has installed Roof Top Solar PV Plant of 166 KW. Furthermore planned to install 110 KW Roof Top Solar PV Plant in the upcoming year.

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CHAPTER IV
STUDY OF WASTE MANAGEMENT

4.1 Segregation of Waste at Source:

The Waste is segregated at source in separate Waste Bins & is handed over for further action.

Photograph of Waste Collection Bins:



4.2 Bio Composting Pit:

TheUniversity has installed Bio CompostingMachine, to convert the Leafy Waste into Bio Compost.

Photograph of Bio Composting Machine:





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4.3Liquid Waste Management:

The University has installed Waste Water Treatment Plant to convert the waste water into usable water for gardening purposes.





4.4 Sanitary Waste Management:

The University has installed Sanitary Waste Incinerator for disposal of the Sanitary Waste.

4.5 E Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

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CHAPTER V
STUDY OF RAIN WATER HARVESTING

The University has implemented the Rain Water HarvestingProject. The Institute has installed Pipes from the terrace and the Rain water falling on the terrace is gathered and is used for recharging the land water table and gardening purpose.

Photograph ofRain Water Management &Pipe Section:





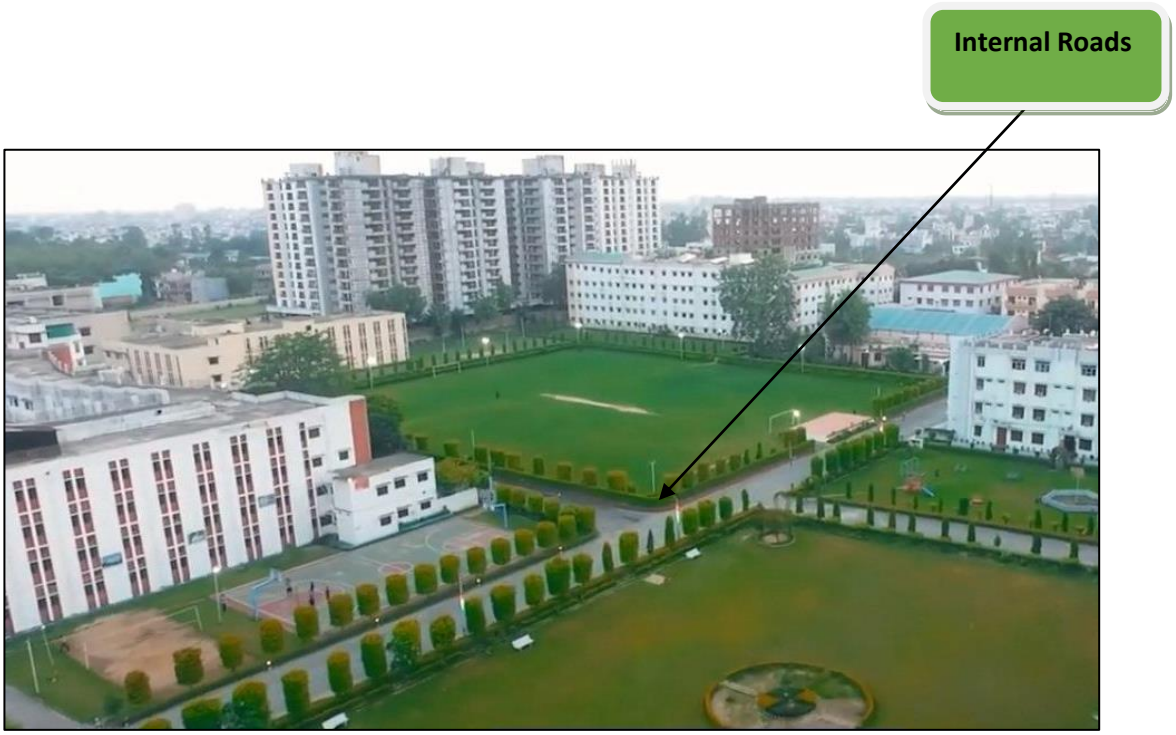
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CHAPTER VI
STUDY OF GREEN & SUSTAINABLE PRACTICES

6.1 Pedestrian Friendly Road:

The University has well maintained internal road to facilitate the easy movement of the students within the campus.

Photograph of Internal Road:



6.2 Internal Tree Plantation

The University has well maintained landscaped medicinal plant garden in the campus.

Photograph of Internal Tree plantation:



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6.2Creation of Awareness about Water& Energy Conservation:

The University has displayed posters emphasizing on importance of Water & Energy Conservation.

Photograph of Poster on Energy Conservation:



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MEDA Registration No: ECN/2022-23/CR-43/1709
ISO: 9001-2015 Certified (Cert No: 23EQKC13),
ISO: 14001-2015 Certified (Cert No: 23EEKW20)

GREEN AUDIT CERTIFICATE

Certificate No: ES/BIU/22-23/02 **Date: 26/04/2023**

This is to certify that we have conducted Green Audit at Bareilly International University, Bareilly, in the Year 2022-23.

The University has adopted following Green & Sustainable Practices:

- Usage of Energy Efficient LED Light Fitting
- Segregation of Waste at Source
- Provision of Waste Water Treatment Plant
- Implementation of Rain Water Harvesting Project
- Maintenance of Good Internal Road
- Creation of awareness on Resource Conservation by Display of Posters

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

For Engress Services,

ENGRESS SERVICES PUNE

A Y Mehendale,
B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192
ASSOCHAM GEM Certified Professional: GEM: 22/788

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